

REMARKS/ARGUMENTS

Claims 18-20 and 36-44 are pending, and claims 18-20, 36-38, and 40-42 stand substantively rejected. Claims 1-17 and 21-35 are canceled, and claims 43 and 44 are withdrawn. In this Amendment, claims 18 and 39 are amended, and claim 38 is canceled. Reconsideration is respectfully requested.

Claim Amendments

Amended claim 18 incorporates elements from canceled claim 38. Claim 39 is amended to conform antecedent basis. No new matter is introduced.

Request to Withdraw Finality of Office Action

According to MPEP 704.11(b)(III), the reasonable necessity criteria for a Requirement for Information under Rule 1.105 implies further action by the Examiner, and therefore Actions making the Requirement *should* generally be a *non-final* action.

The Final Office Action mailed July 21, 2010 contains a Requirement for Information. Hence, further action by the Examiner is implied, and the Office Action *should be non-final*, pursuant to MPEP 704.11(b)(III) since the Applicant's reply must be considered. Withdrawal of the finality of the Final Office Action is therefore respectfully requested.

Consideration as "Special" Application and Request for Termination

The instant application is considered "special" under MPEP 707.02. Applicant reiterates the Request for Termination of Prosecution previously made on September 23, 2009.

Interview

Applicant thanks the Examiner for the courtesies extended during the interview of July 20, 2010. Pursuant to MPEP 713.04, the substance of the interview is hereby made of record. Claims 38 and 39 of the instant application was discussed and it was agreed these claims present statutory subject matter under 35 U.S.C. §101.

Rejection Under 35 U.S.C. §101 (Page 5 of the Office Action)

Claims 18-20, 36-38, and 40-42 were rejected under 35 U.S.C. §101 as allegedly drawn to non-statutory subject matter. This rejection is traversed.

Amended independent claim 18 incorporates the elements of claim 38, which as noted above presents statutory subject matter. Claims 19, 20, 36, 37, and 39-42 depend directly or indirectly from amended claim 18, and for at least this reason also recite statutory subject matter. Claim 38 is canceled. Withdrawal of this rejection is respectfully requested.

Requirement for Information (Page 5 of the Office Action)

The Requirement for Information is not properly authorized

In relation to the Requirement for Information, the Federal Register, Vol. 65, No. 175 (September 8, 2000) at page 54635 stated:

“The Office recognizes that with a large examining staff there are bound to be a small number of cases that need corrective action.”

Relatedly, Comment 50 suggested that any Requirement for Information first be reviewed by an SPE or Director in the Technology Center before being sent. The Response indicated that as the Office moves toward implementing §1.105, the comment will be evaluated to study its feasibility.

On August 1, 2001, the USPTO provided a Slide Presentation titled “PBG-Final Rule”, currently posted at <http://www.uspto.gov/web/offices/dcom/olia/pbg/pbgv20.pps>, which states:

“§1.105 – Requirement for Information Implementation

What is the plan to ensure proper implementation?

[...]

- Supervisory Review

- Each Technology Center will provide supervisory review and authorization over all rule §1.105 requirements prior to mailing.” (Emphasis in original).

A copy is provided for ease of reference as **Exhibit 1**. There is no indication that the instant Requirement for Information received supervisory review and authorization. Hence, it was not properly implemented. While Applicant is providing Information as identified below, such Information is being provided only in an abundance of caution and so as to attempt to expedite prosecution, as Applicant does not acquiesce in the propriety of the Requirement of Information.

The Requirement for Information is not timely made

A Rule 1.105 Requirement is a tool to be used at the Examiner's discretion and is designed, for example, to invite more relevant information into the record faster.

MPEP 704.11(b) clearly states that a Requirement for Information under 37 CFR 1.105 should be made at the earliest opportunity after the necessity is recognized, that the optimum time for making a requirement is prior to or with a first action on the merits, and that ordinarily, a request for information should not be made with or after a final rejection.

In the instant case, therefore, the making of a Requirement for Information with a *second* Final Rejection, following *two* Appeals, plainly violates the admonishments of MPEP 704.11(b).

To recap, the application was filed December 6, 2001. The first action on the merits was mailed March 10, 2004, and a Final Rejection was mailed August 24, 2005. A first Appeal Brief was filed March 21, 2006 and prosecution was reopened June 15, 2006. A second Appeal Brief was filed October 27, 2006 and prosecution was reopened March 17, 2009. The Requirement for Information was included with a second Final Office Action mailed July 21, 2010. Any Request for Information should have been in 2004, or in 2005 if extraordinary circumstances so warranted.

A thorough Examination has already been completed

According to MPEP 704.11, a Requirement of Information is appropriate when necessary to carry out a proper examination. This application, however, has been thoroughly examined over the course of more than six years, during which time Applicant has successfully addressed multiple §102 and 103 Rejections (outlined below).

§102 or 103 Rejection	Rejection <u>Asserted</u>	Rejection <u>Withdrawn</u>
§102 Glass	OA mailed March 10, 2004	OA mailed October 21, 2004
§103 Glass	OA mailed March 10, 2004	OA mailed October 21, 2004
§102 Seibel	OA mailed October 21, 2004	OA mailed March 29, 2005
§103 Wiemker	OA mailed October 21, 2004	OA mailed March 29, 2005
§103 Seibel, Odrich, Burns	OA mailed March 29, 2005	OA mailed March 17, 2009
§103 Hochman, Odrich, Burns	OA mailed March 17, 2009	OA mailed July 21, 2010
§103 Hochman, Telfair, Burns	OA mailed August 18, 2009	OA mailed July 21, 2010

Relatedly, according to PAIR, the instant application has been searched by the Examiner on several occasions, including searches on or about the following dates:

December 6, 2001

October 21, 2004

March 29, 2005

August 24, 2005

June 15, 2006

March 17, 2009

August 18, 2009

July 21, 2010

It is erroneous, *after* such a comprehensive and substantive examination has been completed, to conclude that a proper examination cannot occur without the resolution of certain factual issues. According to the Federal Register (Vol. 65, No. 175, p. 54634-5), Rule 1.105 must not be used as a fishing expedition.

The Requirement for Information is inappropriate for this “special” application

A Requirement for Information made at such a late stage in prosecution is antithetical to the guidance provided in MPEP 707.02 for “special” applications. MPEP 707.02 states that in fact the shortest path to the final disposition of an application is by finding the best references on the first search and carefully applying them, that the supervisory patent examiner is expected to personally check on the pendency of every application which is up for the third or

subsequent Office Action with a view to finally concluding its prosecution, and that any application that has been pending five years should be carefully studied by the supervisory patent examiner and every effort should be made to terminate its prosecution.

Because the making of the Request for Information is in direct contradiction to the guidelines provided in the MPEP, Applicant submits that the Request for Information constitutes an improper exercise of Examiner discretion.

It is noted that due to the multiple sequential §102 and 103 Rejections outlined above, prosecution in this application has been extended to extraordinary lengths rarely seen. Sadly, the first named inventor Dr. Lawrence W. Stark died Oct. 22, 2004, nearly six years ago.

Response to Requirement

Notwithstanding that the Requirement for Information lacks the proper timing and authorization, the substance of the Requirement is addressed below.

1. Background information on Rule 1.105 is not a Requirement

Pages 2 to 4 of the Office Action provide an expansive narrative of various aspects of Rule 1.105. No specific or identifiable Requirement for Information, however, is made therein. According to MPEP 704.11, a Requirement for Information under Rule 1.105 places a substantial burden on the Applicant that is to be minimized by *clearly focusing the reason for the requirement* and the scope of the expected response. Thus, the scope of the requirement should be narrowly defined, and a Requirement under Rule 1.105 may only be made when the Examiner has a reasonable basis for requiring information. Without more, Applicant's understand this section of the Office Action to be merely informative in nature, and not substantively related to any focused or narrow Requirement for Information.

2. Co-Pending Applications and Issued Patents

Page 5 of the Office Action alleges there are numerous other co-pending applications and issued patents, which disclose and claim very similar and/or identical subject matter. It is not clear whether this statement is intended as a Requirement for Information or for some other purpose. Regardless, the Applicant is not aware of any other patent filing which has claims identical to those pending in the instant application. Certainly, however, there is unclaimed subject matter contained in the instant application which is also present (claimed

and/or unclaimed) in many other applications filed on behalf of the Assignee of the subject application. Elements included in claims of the subject application may also overlap with elements of claims found in a variety of other co-assigned applications, notwithstanding significant and substantive differences between the inventions now being claimed and the inventions of the co-assigned cases. In an abundance of caution, Applicant attaches herewith a listing of co-pending applications and issued patents which may contain such claimed and/or unclaimed subject matter (**Appendix A**).

3. Specific Technical Inquiry

Page 5 of the Office Action requests, in accordance with 37 CFR 1.105 and MPEP 704.11(a), information concerning the analysis of the accuracy of gradient fields, the application of surface integrals to the determination of the accuracy of data arrays or points, and the application of Green's Theorem to determining the validity of either data points or data arrays. In response thereto, and pursuant to MPEP 704.12(b), Applicant provides the following information.

Applicant's file also contains mention of a brief biography for Rudolf Otto Sigismund Lipschitz, born 14 May 1832 in Konigsberg, Germany (now Kaliningrad, Russia), died 7 Oct. 1903 in Bonn Germany, which states that Lipschitz is remembered for the 'Lipschitz Condition', an inequality that guarantees a unique solution to the differential equation $y = f(x,y)$. Peano gave an existence theorem for this differential equation, giving conditions which guarantee at least one solution. Applicant believes this biography predates the filing date of the instant application.

According to Wikipedia, the free online encyclopedia, "[i]n mathematics, more specifically in real analysis, Lipschitz continuity, named after Rudolf Lipschitz, is a smoothness condition for functions which is stronger than regular continuity. Intuitively, a Lipschitz continuous function is limited in how fast it can change; a line joining any two points on the graph of this function will never have a slope steeper than a certain number called the Lipschitz constant of the function."

Appendix B

US 5,054,907 which discusses a real time image for accurately displaying the shape of the cornea.

Appendix C

US 5,170,193 which discusses techniques for obtaining the accurate location of reflected signal from a background light and locating a peak or center of the signal.

Appendix D

US 6,050,687 which discusses approaches for measuring refractive properties of the human eye.

Appendix E

Dyson, J. Opt. Soc. Am., Vol. 65(5), pp. 551-558, May 1975, which discusses a general theoretical analysis of the performance of optical systems that are designed to give diffraction-limited images of astronomical objects by compensating effects of atmospheric seeing in real time.

Appendix F

Fried, J. Opt. Soc. Am., Vol. 67(3), pp. 370-375, March 1977, which discusses least-square fitting a wave-front distortion estimate to an array of phase-difference measurements.

Appendix G

Hudgin, J. Opt. Soc. Am., Vol. 67(3), pp. 375-378, March 1977, which discusses wave-front reconstruction for compensated imaging.

Appendix H

Hudgin, J. Opt. Soc. Am., Vol. 67(3), pp. 378-382, March 1977, which discusses optimal wave-front estimation.

Appendix I

Noll, J. Opt. Soc. Am., Vol. 68, No. 1, pp. 139-140, January 1978, which discusses a Green function in the context of phase estimates from slope-type wave-front sensors.

Appendix J

Born & Wolf, Principles of Optics, 6th Ed. (1980), pp. 374-383, 797 which discusses Green's Theorem in the context of diffraction.

Appendix K

Wallner, Wavefront Sensing, Proc. SPIE Vol. 351, pp. 42-53 (1982), which discusses the comparison of wavefront sensor configurations using optimal reconstruction and correction.

Appendix L

Wallner, J. Opt. Soc. Am., Vol. 73(12), pp. 1771-1776, 1983, which discusses optimal wave-front correction using slope measurements.

Appendix M

Marsden and Tromba, Vector Calculus, Second Edition, 1981, pp. 96-103, 404-413, 448-467, 484-485, and 586-587 which discusses Green's Theorem.

Appendix N

Article discussing life and death of first named inventor, Dr. Lawrence W. Stark.

As noted above, the first named inventor Dr. Lawrence W. Stark passed away approximately four years following the priority date of the instant application and nearly six years before this Request for Information was made.

Nonetheless, Applicant has made a reasonable inquiry upon request of the information and a good faith attempt to obtain the requested information.

In sum, notwithstanding the difficulty in ascertaining the scope and breadth of the information being sought, and the challenge of identifying and obtaining the requested information at this late date, in order to expedite the prosecution of this application and (as much as possible) minimize still further delay in issuance, Applicant has made a *bona fide* attempt at a complete response.

Appl. No. 10/006,992
Amdt. dated September 21, 2010
Reply to Office Action of July 21, 2010

PATENT

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,

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ATTACHMENTS

Exhibit 1; Appendices A-N

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